

FOREST ROAD EXCISE TAX SUMMARY SHEET

Region: Pacific Cascade

Timber Sale Name: North Johnson

Application Number: 76165

Excise Tax Applicable Activities

Construction: 1154 linear feet

Road to be constructed (optional and required) but not abandoned

Reconstruction: _____ linear feet

Road to be reconstructed (optional and required) but not abandoned

Abandonment: _____ linear feet

Abandonment of existing roads not reconstructed under the contract

Deactivation: _____ linear feet

Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: 2100 linear feet

Existing road to receive maintenance work (specifically required by the contract) prior to haul

Excise Tax Exempt Activities

Temporary Optional Construction: 1538 linear feet

Optional roads to be constructed and then abandoned

Temporary Optional Reconstruction: _____ linear feet

Optional roads to be reconstructed and then abandoned

New Abandonment: 1538 linear feet

Abandonment of roads constructed or reconstructed under the contract

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

ROAD PLAN

Name of Sale North Johnson

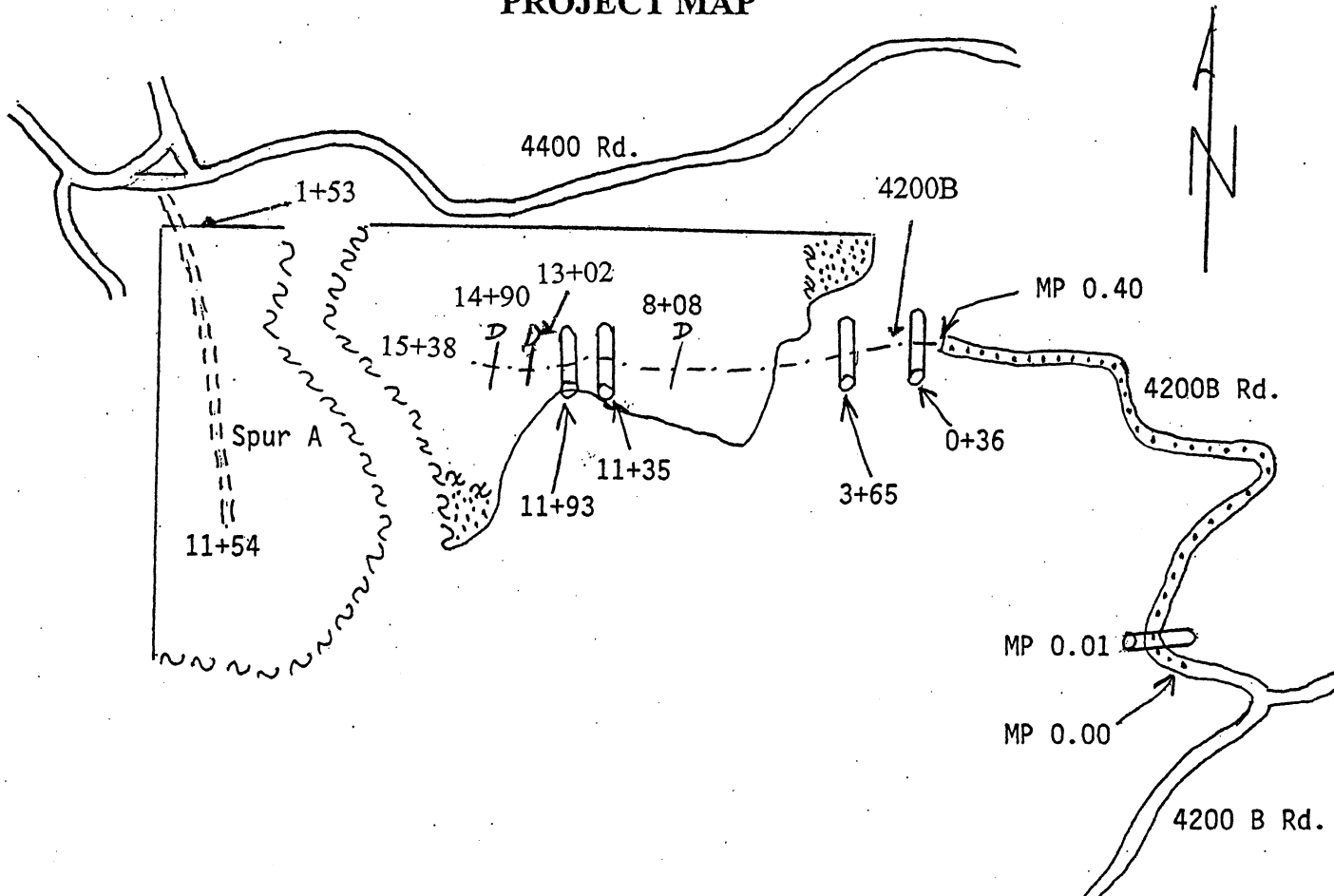
Pacific Cascade Region

Application No. 76165

County Cowlitz

Section 36 Township 10 North, Range 1 East, W.M.

PROJECT MAP



Legend

- | | | | |
|--|-------------------------|--|-------------------------|
| | - Existing Roads | | - Required Construction |
| | - Pre-haul Maintenance | | |
| | - Optional Construction | | |
| | - Culverts | | |
| | - Sale Boundary Tags | | |
| | - Leave Tree Areas | | |
| | - Rolling Dip | | |

Scale: 1" = 600'

Road Plan

Date: 4/01/04

Sheet / of 18

ROAD PLAN

SALE NAME: North Johnson

ROAD PLAN DATE: 06/09/2004

SECTION 1 - GENERAL CLAUSES

1.1-1

Clauses in this plan apply to all construction or reconstruction including landings unless otherwise noted.

1.1-2

Construction of the following road is required. All roads shall be constructed on the State's location and in accordance with this Road Plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
Spur A	0+00 to 11+54	Construction

1.1-3

Construction or pre-haul maintenance of the following road/s is not required. Roads used by the Purchaser shall be constructed or reconstructed on the State's location and in accordance with this Road Plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
4200B	MP 0.00 to 0.40	Pre-haul Maintenance
4200B	0+00 to 14+90 15+38	Construction

Pre-haul maintenance consists of brushing, application of patch rock, cleaning ditches and culverts, and grading the road surface. See attached Brushing Detail.

1.1-4

If the Purchaser desires a road location or design change, a written request shall be submitted to the State for consideration.

1.1-5

On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or Purchaser's choice of construction season or techniques shall be at the Purchaser's expense. Hidden conditions include, but are not limited to: solid subsurface rock, subsurface springs, saturated ground, and unstable soil.

1.2-1

The construction or reconstruction of all roads specified herein shall not be permitted between November 1 and April 30 unless authority to do so is granted, in writing, by the Contract Administrator.

1.2-2

Purchaser shall not use roads constructed or reconstructed under this Road Plan for hauling, other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1.2.1-1

Pioneering shall not extend past construction that will be completed during the current construction season. Drainage shall be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.

Clearing and grubbing shall be completed prior to starting excavation and embankment.

Culvert placement in live streams shall precede embankment where culverts are to be placed along natural

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ground.

Culverts shall be installed in completed subgrade as construction progresses.

Subgrade, ditches, and culvert installations shall be completed and are subject to written approval by the Contract Administrator prior to rock application.

1.5-1

Maintenance on roads listed in Contract Clauses C-50 (Purchaser Road Maintenance and Repair) and C-60 (Designated Road Maintainer) shall be performed in accordance with Forest Access Road Maintenance Specifications.

1.5-3

Snowplowing will be permitted only after execution of a "Snow Plowing Agreement", which is available from the contract administrator upon request.

SECTION 2 - CLEARING

2.1-1

Fell all vegetative material larger than 6 inches DBH or over 20 feet high between the marked right-of-way boundaries and within waste areas or if not marked in the field, between clearing limits specified on TYPICAL SECTION SHEET.

2.1-3

Right-of way timber shall not be decked within the grubbing limits or in locations that interfere with construction of the road prism or impede drainage.

SECTION 3 - GRUBBING

3-1

All stumps shall be removed that fall between grubbing limits shown on the TYPICAL SECTION SHEET. Those outside the grubbing limits but with undercut roots shall also be removed. Stumps over 22 inches diameter shall be split. Stumps over 40 inches shall be quartered.

3-2

Grubbing limits are defined as the entire area between the external limits shown on the TYPICAL SECTION SHEET.

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

4.1-1

Right-of way debris is defined as all vegetative material larger than one cubic foot in volume, within the clearing limits

4.2.3-3

Right-of-way debris shall not be placed against standing timber.

4.2.3-4

Right-of-way debris shall be scattered outside the grubbing limits.

4.3-1

On the following roads, vegetative material including limbs up to 3 inches in diameter shall be cut and removed to 10 feet beyond the back of the ditch and 10 feet beyond the outer edge of the subgrade and to a

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height of 14 feet above the road surface. Vegetative material shall be cut as near flush with the ground as possible, but shall not extend more than 3 inches above the ground.

<u>Road</u>	<u>Stations</u>
4200B	MP 0.00 to 0.40

SECTION 5 - EXCAVATION

5.1-1

Unless controlled by construction stakes or specific design sheets herein, roads shall be constructed or reconstructed in accordance with dimensions shown on the TYPICAL SECTION SHEET.

5.1-3

Road grade and alignment shall conform to the State's marked location. Grade and alignment shall have smooth continuity without abrupt changes in direction. Maximum grades are 18 percent favorable and 12 percent adverse or as specified on drawings. Minimum radius curve is 60 feet.

5.1-7

Roads shall be constructed to the dimensions shown on the TYPICAL SECTION SHEET, within the tolerance listed below. Tolerance classes for each road are listed on the TYPICAL SECTION SHEET.

<u>Tolerance Class</u>	<u>A</u>	<u>B</u>	<u>C</u>
Road Width (feet)	+1.5	+1.5	+2.0
Subgrade elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

5.1-8

Excavation slopes shall be constructed no steeper than shown on the following table (except as construction staked or designed.):

<u>Material Type</u>	<u>Excavation Slope Ratio</u>
Common Earth (on side slopes of 55%)	1:1
Common Earth (55% to 70% sideslopes)	3/4:1
Common Earth (on slopes over 70%)	1/2:1
Fractured or loose rock	1/2:1
Hardpan or solid rock.....	1/4:1

5.1-9

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

5.1-10

Embankments shall be widened as follows:

<u>Height at Centerline</u>	<u>Subgrade Widening</u>
Less than 6 feet	2 feet
6 feet or over	4 feet

5.1-11

Embankment slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>
Common Earth and Rounded Gravel	1 1/2:1

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Angular Rock 11/4:1
Sandy Soils 2:1

5.1-12

Organic material shall be excluded from embankment and from waste material deposited on slopes in excess of 40 percent.

5.1-14

Where side slopes exceed 45 percent, full bench construction shall be utilized for the entire subgrade width .

5.1-15

Waste material may be deposited adjacent to the road prism on side slopes up to 45 percent if the waste material is compacted and more than 50 feet away from live streams. On side slopes over 45 percent, all excavation shall be end hauled or pushed to designated embankment sites. All waste embankments shall be compacted in horizontal layers not exceeding 2 feet.

5.1-21

Waste material shall not be deposited within 50 feet of a live stream.

5.1-24

Turnouts shall be intervisible with a maximum of 1,000 feet between turnouts unless shown otherwise on drawings.

5.2-1

Road pioneering operations shall not undercut the final cut slope, deposit excavated material outside the right-of-way limits, or restrict drainage.

5.3-1

All embankment and waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts. Side hill embankments too narrow to accommodate excavation equipment may be placed by end-dumping or side casting until sufficiently wide to support the equipment.

5.4-1

Silt-bearing runoff shall not be permitted to go into streams.

5.4-2

Accomplish sediment removal through silt traps, silt fences, settling ponds, or other methods as approved, in writing, by the Contract Administrator.

5.4-3

Purchaser shall seed and fertilize excavation and embankment slopes. Application rate shall be 40 pounds seed per acre and 100 pounds fertilizer per acre. Seed and fertilizer will be provided by the Purchaser.

5.4-3.1

Purchaser shall furnish and evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 40 pounds per acre. The date of application is subject to approval by the Contract Administrator.

Mixture Percent by Weight

50% Fescue, Red
25% Ryegrass, Perennial
15% Bentgrass
10% Clover, White and White
Dutch (inoculated)

Minimum Percent Germination

90% Germination
90% Germination
85% Germination
90% Germination

Weed seed shall not exceed 0.5% by weight.

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Seed shall be furnished in standard containers on which the following shall be shown:

1. Common name of seed
2. Net weight
3. Percent of purity
4. Percentage of germination
5. Percentage of weed seed and inert material

Required seed not spread by the termination of this contract shall become property of the State.

5.5-5

Finished subgrade shall be crowned or outsloped as shown on the TYPICAL SECTION SHEET, and shall be uniform, firm, rut-free, and shaped to ensure surface runoff in an even, unconcentrated manner.

SECTION 6 - DRAINAGE

6.2.1-1

Purchaser shall furnish, install, and maintain galvanized culverts meeting AASHTO M-36 or corrugated polyethylene pipe meeting AASHTO specification No. M-294-S as designated on the CULVERT LIST. Culvert and flume lengths shall be varied to fit as-built conditions subject to written approval by the Contract Administrator. Refer to Hydraulic Project Approval/s for applicable culvert installations.

6.2.1-2

Annular corrugated bands and culvert ends shall be used on metal culverts. On culverts 24 inches and smaller, bands shall have a minimum width of 12 inches; on culverts over 24 inches, bands shall have a minimum width of 24 inches. Manufacturer's approved connectors shall be used for corrugated polyethylene pipe.

6.2.2.1-1

Culvert, downspout, flume, and energy dissipator installation shall be in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Touch up damaged galvanized coating with 2 coats of zinc rich paint.

6.2.2.3-1

Cross drains and surface culverts on road grades in excess of 3% shall be skewed at least 30 degrees from perpendicular to the road centerline, except that cross drain culverts at the low points of dips in roads shall not be skewed.

6.2.2.3-2

Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3% nor more than 10%.

6.2.2.5-1

Drainage structure outfalls shall not terminate directly on unprotected soil that will erode. Downspouts, flumes, and energy dissipators shall be installed to prevent erosion.

6.3-1

Ditches shall be constructed concurrently with construction of the subgrade. Ditches shall drain to culverts, ditchouts, and natural drainages.

6.4-1

Catch basins shall be constructed to resist erosion in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions: two feet wide and four feet long with backslopes consistent with Clause 5.1-8: Excavation Slopes.

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- 6.5-1
Headwalls shall be constructed in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts except for temporary culverts.
- 6.6-2
On the following road, Purchaser shall construct rolling dips as shown on the ROLLING DIP DETAIL.

<u>Road</u>	<u>Stations</u>
4200 B	8+08, 13+02, 14+90

SECTION 7 - ROCK

- 7.1-1
Rock used under this contract may be obtained from the following source/s on State land as listed below at no charge to the Purchaser.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
4250 pit	Section 11 (9-2E)	Pitrun

- 7.1-5
Use of rock sources not listed in this section is subject to written approval from the contract administrator.
- 7.2-1
All pit operations shall be performed as directed by the contract administrator and in accordance with the Pit Development and Reclamation Plan/s.
- 7.2.1-1
Rock shall meet the following specifications for gradation when placed on the subgrade:

No more than 10% of the rock shall be larger than 8 inches in any dimension and no rock shall be larger than 12 inches in any dimension.
- 7.4.2-1
Apply at least the minimum required rock quantity (Truck measure) as shown on ROCK LIST.
- 7.4.2-5
Subgrade shall be approved, in writing, by the Contract Administrator prior to application of rock.
- 7.4.2-8
Each lift of rock shall be crowned or outsloped as shown on TYPICAL SECTION SHEET, and shall be uniform, firm, rut-free, and shaped to ensure surface runoff in an even, unconcentrated manner.
- 7.4.2-11
Purchaser shall spot patch and apply rock as directed by the Contract Administrator in accordance with quantities shown on ROCK LIST.

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Road
4200B

Stations
MP 0.00-0.4

SECTION 9 - ROAD AND LANDING CLOSURES

9.1-1

The following road/s shall be closed by the purchaser within 10 days following completion of timber harvest. All road abandonment shall be in accordance with Forest Practice Regulations.

Road
4200B

Stations
0+00 to 15+38

9.1-2

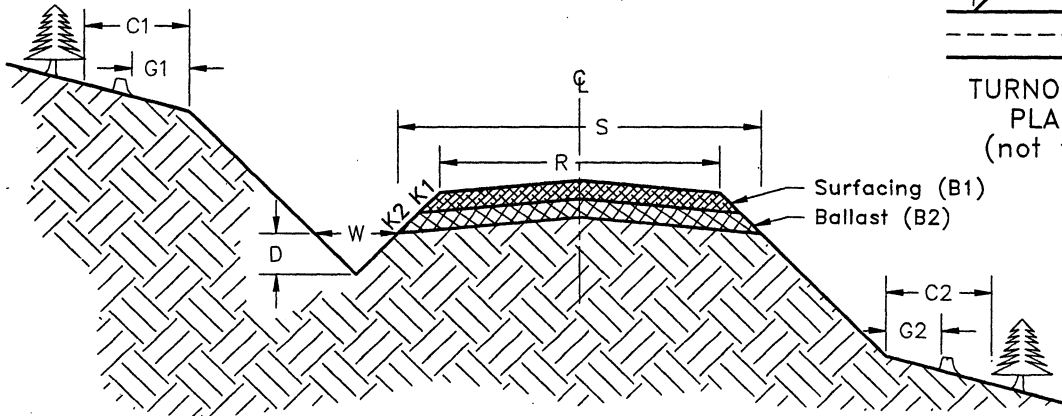
Closure shall consist of:

1. Constructing waterbars in accordance with waterbar detail at a maximum spacing of 100' or no more than a 10' vertical drop between waterbars.
2. Skewing waterbars at least 30 degrees from perpendicular to the road centerline.
3. Construction of road closure trenches in conformance with the "Road Closure Trench Detail".
4. Removal of culverts and disposal from State Land. Remove fill material from streams, leaving stream banks at natural slopes.
5. Providing grass seed and fertilizer on all exposed soil per Clause 5.6-2.

9.2-1

Purchaser shall reduce or relocate landing debris, in a manner approved by the Contract Administrator, to avoid landing failures and potential debris slides.

ROAD PLAN

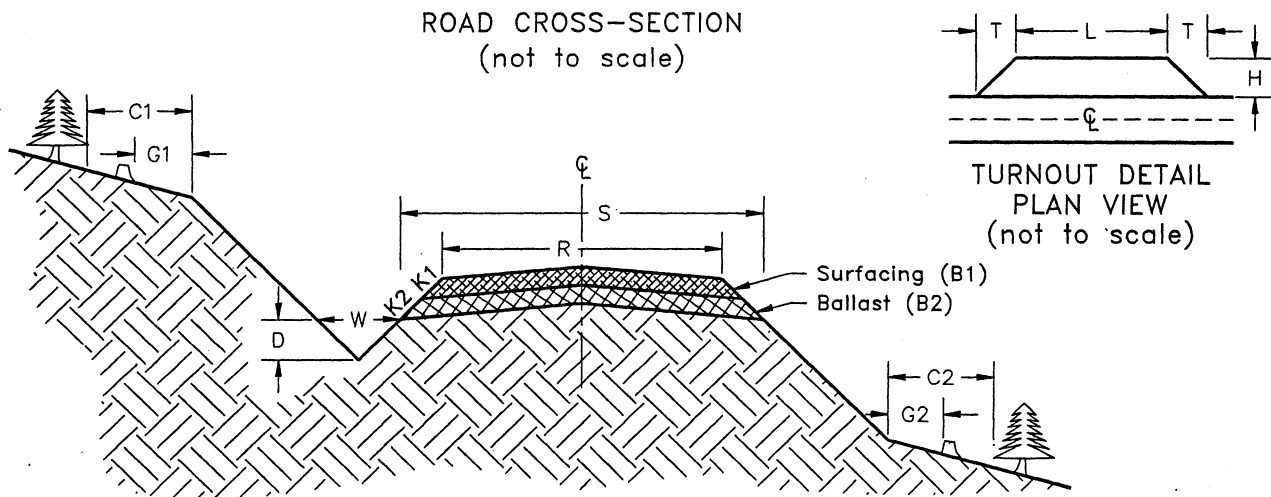
ROAD PLAN DATE: 06/09/2004

TYPICAL SECTION SHEET

[illegible]

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BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2					L	H	T
4200B	MP 0.00	MP 0.40	Patch	Rock			200	1.	50'	12'	50'
4200B	0+00	15+38		18"	84	15.38	1292	1.			
	T.O.			18"	84	1	84	1.			
Spur A	0+00	11+54		18"	84	11.54	969	1.			
	T.O.			18"	84	1	84	1.			
Landings					75	4	300	1.			

BALLAST TOTAL 2929 Cubic Yards

SURFACING

[illegible]

SURFACE TOTAL _____ Cubic Yards

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[illegible]

SR - Shot Rock
NT - Native (bank run)
SL - Select Fill
HL - Heavy Loose Riprap
LL - Light Loose Riprap
Flume - Half round pipe
Downspout - Full round pipe

The diagram illustrates a cross-section of a pothole repair. At the top, a horizontal line is labeled "Road Surface". Below this, a rectangular area represents the pothole. To the left of this area, a vertical dimension line indicates a depth of "Minimum 12\". The pothole itself is a circle. To the right of the pothole, a vertical line is labeled "BEDDING MATERIAL:". Below this label, a text box contains the following instructions: "Materials of poor or non-uniform bearing capacity shall be removed and replaced with suitable fill."

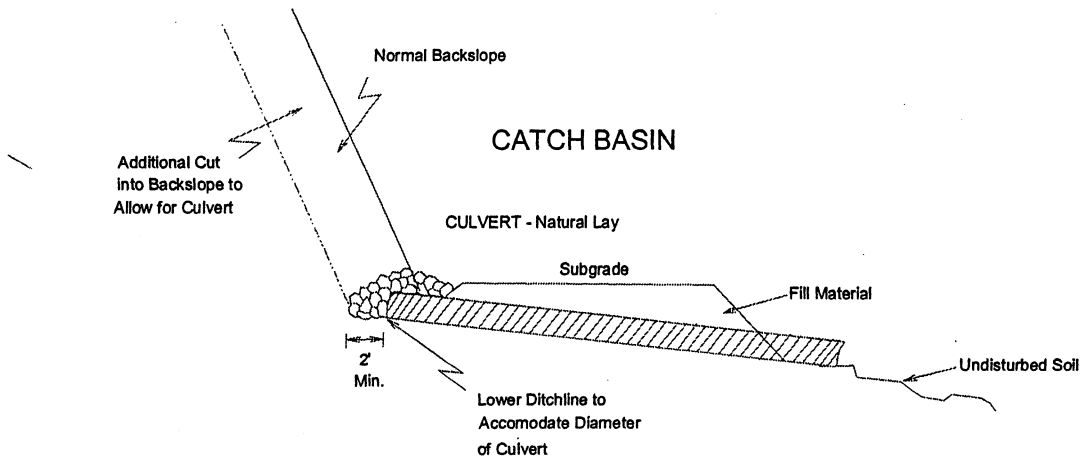
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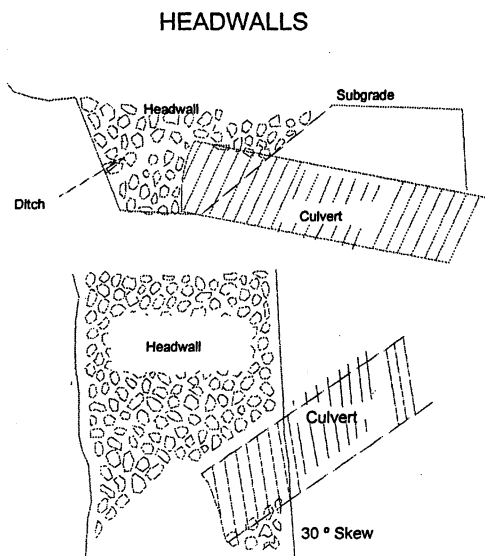
ROAD PLAN DATE: 06/09/2004

CULVERT AND DRAINAGE SPECIFICATION DETAIL

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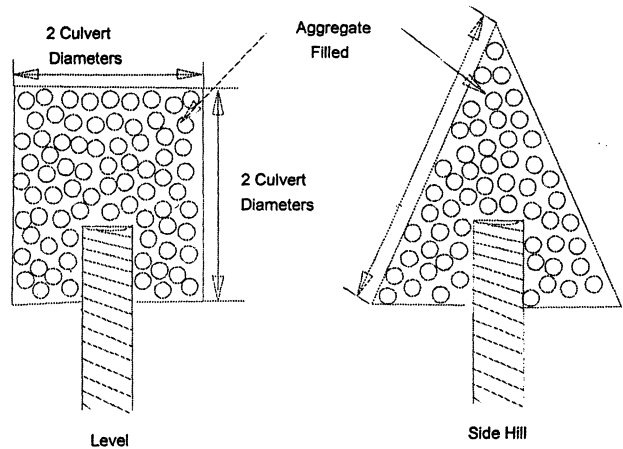


Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.



Headwalls to be constructed of material that will resist erosion.

ENERGY



Dissipator Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the
CULVERT LIST.

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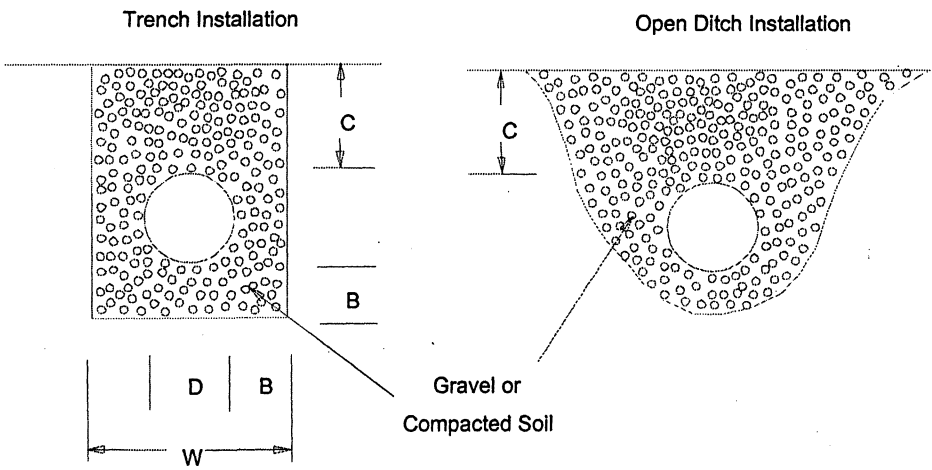
CULVERT AND DRAINAGE SPECIFICATION DETAIL

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POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.
4. Site conditions and availability of bedding materials often dictate the type of installation method used.
5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.

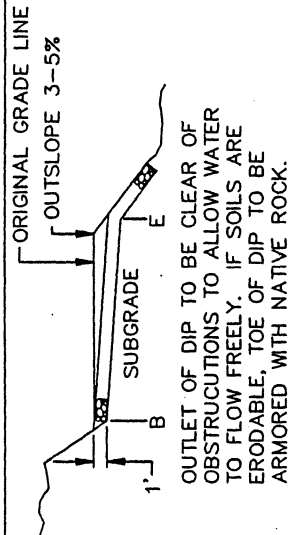
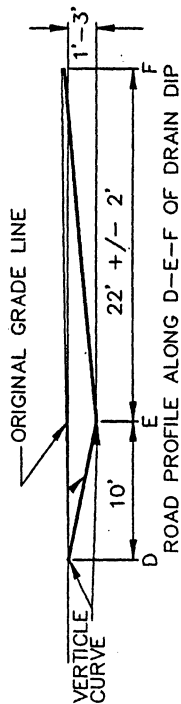
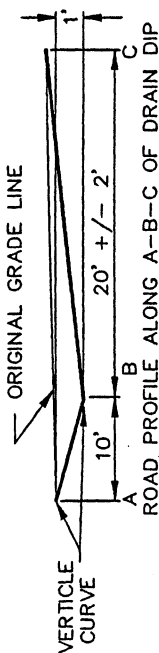


MINIMUM DIMENSIONS
Trench or Open Ditch Installation

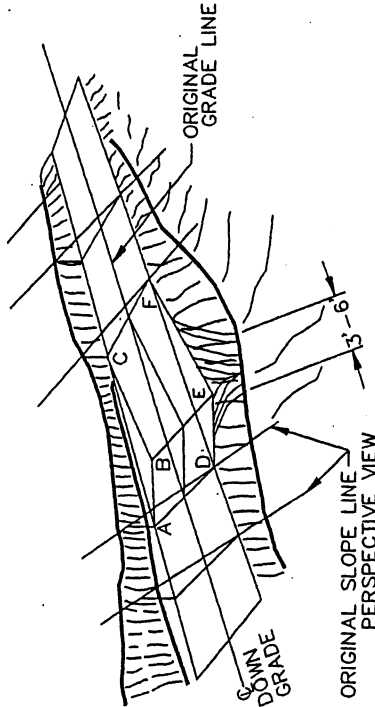
Nominal Diameter	Minimum Thickness	Minimum Cover	Min. Trench Width
D	B	C	W
18"	6"	12"	36"
24"	6"	12"	42"
30"	6"	12"	48"
36"	6"	12"	54"

ROAD PLAN

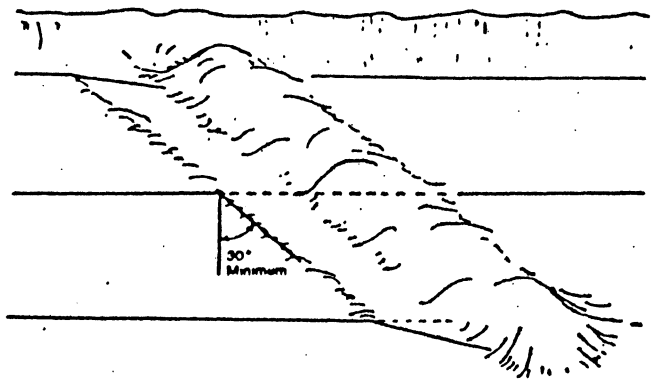
ROLLING DIP DETAIL



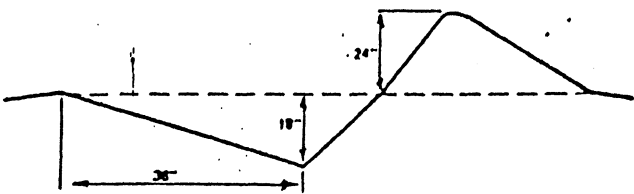
NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP. DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DRAIN FREELY INTO DITCHES OR CULVERT INLETS. WHEN OUTSLOPED, THEY SHALL DRAIN FREELY ONTO NATURAL GROUND. WHERE SOILS ARE ERODABLE, OUTLET SHALL BE ARMORED WITH NATIVE ROCK. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ORIGINAL ROAD GRADE. SKEW LINE B-E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.



WATER BAR DETAIL

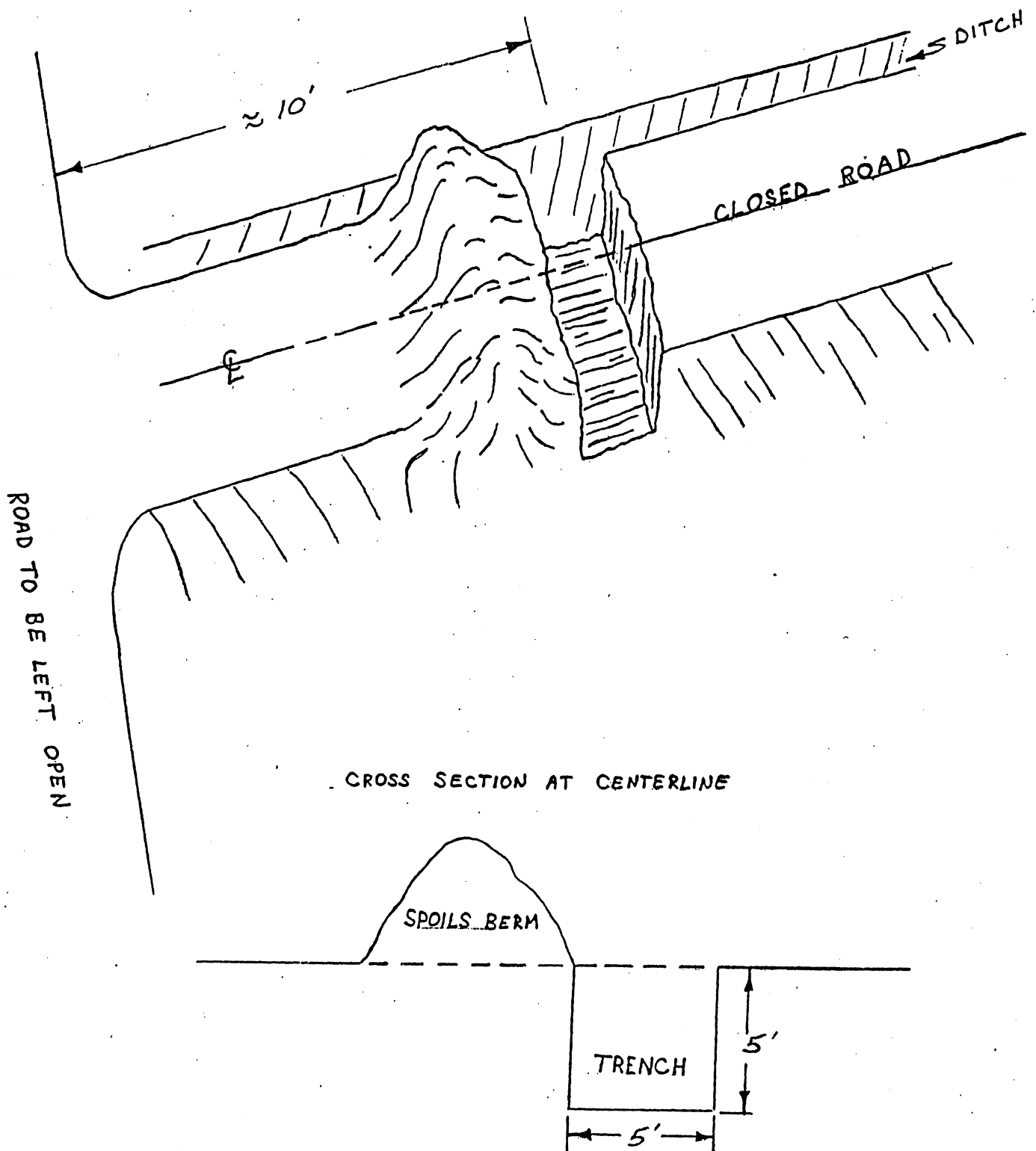


CROSS SECTION AT CENTER LINE



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Road Closure Trench Detail



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STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

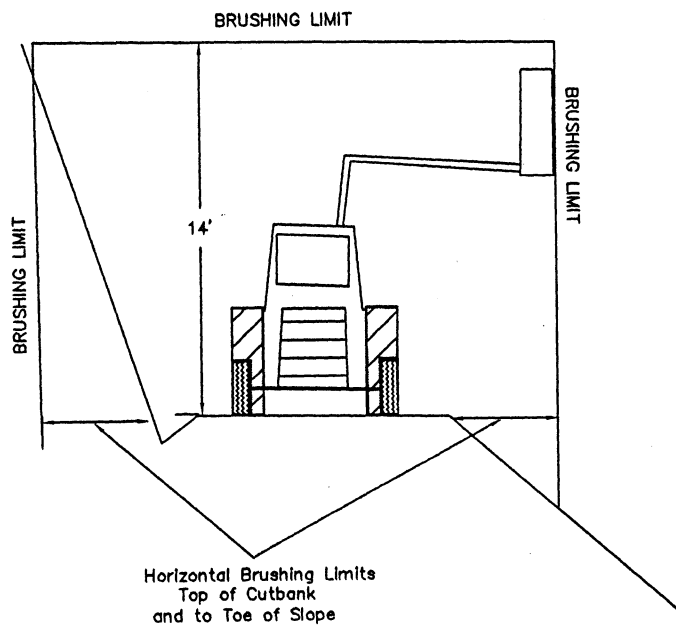
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FOREST ACCESS ROAD
MAINTENANCE SPECIFICATIONS

BRUSHING SECTION DETAIL



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STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

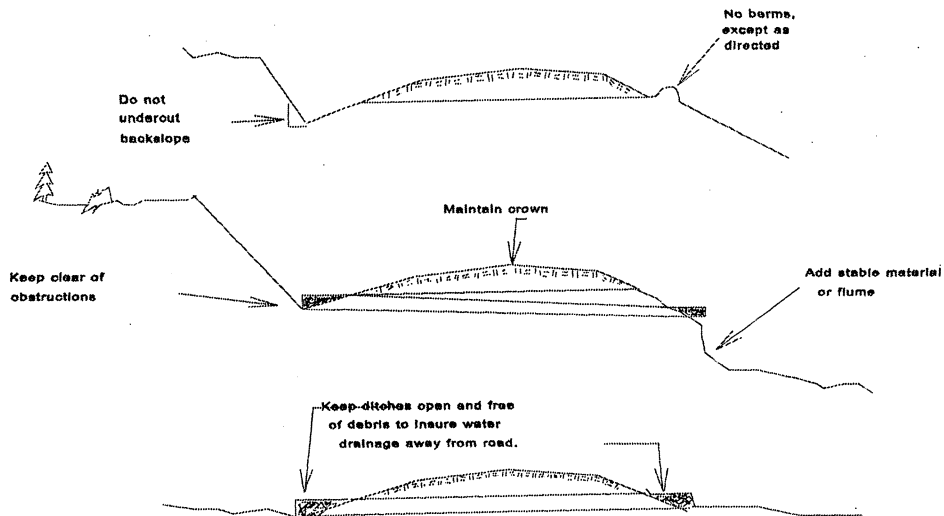
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FOREST ACCESS ROAD
MAINTENANCE SPECIFICATIONS

1. CONSTRUCTION AND RECONSTRUCTION (Prior to acceptance to the contract or acceptance on a timber sale).
 - A. Cuts and Fills
 1. Maintain slope lines as constructed. Remove slides from the ditches and roadway. Replace fills to 11/2:1 slopes with selected material or as directed. Remove overhanging material from the cut slopes.
 2. Material from slides or other sources requiring removal shall not be deposited in streams or at locations where it will erode into streams or water courses.
 3. Undesirable slide materials and debris shall not be mixed into the surface material.
 - B. Surface
 1. Grade and shape the road surface, turnouts, and shoulders to the original crown, inslope or outslope as directed to provide suitable traveled surface and surface water runoff in an even, unconcentrated manner.
 2. Blading must not undercut the backslope at the bottom of the ditchline or cut geotextile at centerline.
 3. Watering may be required to control dust and to retain fine surface rock.
 4. Desirable surface material shall not be bladed off the roadway.
 5. Replace surface material lost or worn away.
 6. Remove berms except as directed by the State.
 7. Barrel spread soft spots to prevent degradation of geotextile.
 - C. Drainage
 1. Keep ditches and drainage channels at outlets and inlets of culverts clear of obstructions and functioning as intended.
 2. Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This must be done even during periods of inactivity.
 3. Add stable material at the outlet end of the culvert as needed to stabilize the stream bed.
 4. Headwalls: maintain to the road shoulder level with material that will resist erosion.
 5. Keep silt bearing surface runoff from getting into live streams.
 - D. Structures
Repair bridges, culverts, cattleguards, fences, and other road structures to the condition required by the construction specifications.
 - E. Termination of Use or End of Season
Do maintenance work to minimize damage from the elements such as blading to insure correct runoff, ditch, and culvert cleaning and water bars.
 - F. Debris
Remove fallen timber, limbs, and stumps from the slopes or roadway.



MINIMUM PIT DEVELOPMENT AND RECLAMATION SPECIFICATIONS

(A) DEVELOPMENT

- 1) Pit location is shown on ~~Reclamation~~ Timber Sale map.
- 2) Minimum clearing distance from the pit edge shall be 75% of the height of the tallest tree.
- 3) The pit floor shall be developed so as to provide a smooth, neat and well drained condition.
- 4) The first face shall have the overburden stripped back a minimum of 15 feet from the pit edge. There shall be no overhangs.
- 5) Overburden shall be deposited as approved by the State Representative.
- 6) Oversize shall be deposited within the pit site area in a place designated by the State Representative.
- 7) Stockpiling operations shall be accomplished in the area as approved by the State Representative. All stockpiled materials shall be maintained in a neat and presentable condition.

(B) RECLAMATION

- 1) Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life.
- 2) The pit floor and the stockpile floor shall be left in a smooth and neat condition, out sloped a minimum of 2% to provide site drainage.
- 3) The pit area shall be worked and left in condition that future operations may proceed in an orderly manner.
- 4) Upon completion of operations, the site shall be cleared of all temporary structures, equipment, and rubbish, and shall be left in a neat and presentable condition.

DATE	CONTRACT NUMBER	PROJECT	
6/1/64	76165	NORTH JOHNSON	SHEET 19 OF 19

ROAD COST SUMMARY

Sale Name North Johnson Agr. No. 30-0 76165

Compiled by Stan Ross Date 04/01/04

Road Cost

Road No. Pre-haul Maint. \$ 4,335.50

Road No. 4200B \$ 25,949.52

Road No. Spur A \$ 18,999.32

Road No. \$

Road No. \$

Total \$ 49,284.34

Sale Volume 1,821 \$/Mbf \$27.06

Sale Name North Johnson

Agr. No. 30-0 76165

Road Cost Summary

ROAD COSTING FORM

Sale Name	<u>North Johnson</u>	Agr. No. 30-	<u>76165</u>	Road No.	<u>Pre-haul Maint.</u>
Compiled by	<u>Stan Ross</u>			Date	<u>April 1, 2004</u>
No. of Stations	<u>21</u>			R/W Width	<u></u>

CLEARING & GRUBBING

Cat days:		@	\$	=	\$	
Brushing days	0.75	@	\$	1000.00	=	\$ 750.00
Revegetation:		@	\$		=	\$ 750.00

EXCAVATION

<u> </u> Cat days:	<u> 0.75 </u>	@	\$	<u> 1000.00 </u>	=	\$	<u> 750.00 </u>	
<u> </u> Excavator days	<u> </u>	@	\$	<u> </u>	=	\$	<u> </u>	
<u>Endhaul</u> volume	<u> </u>	@	\$	<u> </u>	=	\$	<u> </u>	\$ <u> 750.00 </u>

BALLAST & SURFACING

[illegible]

UNIT COSTS	Ballast	Surfacing	Riprap
Drill & shoot			
Dig & load	1.00		
Purchase			
Haul	5.00		
Spread	0.30		
Compact	0.25		
Strip/Reclaim			
Crush			
Total	6.55		

Ballast Source: 4250 pit
Surface Source: _____
Riprap Source: _____

Ballast	<u>200</u>	yds @ \$	<u>6.55</u>	/yds = \$	<u>1310.00</u>	
Surface	<u> </u>	yds @ \$	<u> </u>	/yds = \$	<u> </u>	
Riprap	<u> </u>	yds @ \$	<u> </u>	/yds = \$	<u> </u>	\$ 1,310.00

CULVERTS & FLUMES

G-(Galvanized) P-(Plastic) ED-(energy dissipator) F-(flume)

Diam.	No.	Ga.	Type	Length	Cost/ft	Total
18"	1	16	G	34	15.00	510.00
						\$ 510.00

ABANDONMENT

_____ Excavator days _____ @ \$ _____
 _____ @ \$ _____ \$ _____

OTHER

<u>MOVE IN</u>	<u>Brusher</u>	@	\$	<u>450.00</u>	
	<u> </u>	@	\$	<u> </u>	
	<u> </u>	@	\$	<u> </u>	
	<u> </u>	@	\$	<u> </u>	\$ <u>450.00</u>

Cost per Station \$ 206.45

GENERAL EXPENSES	Subtotal \$	3,770.00	Subtotal X 1.15%	Total	\$	4,335.50
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ROAD COSTING FORM

Sale Name North Johnson Agr. No. 30- 76165 Road No. 4200B
Compiled by Stan Ross Date April 1, 2004
No. of Stations 14.9 R/W Width _____

CLEARING & GRUBBING

Cat days:	<u>3</u>	@	\$	<u>1000.00</u>	=	\$	<u>3000.00</u>	
Excavator days	<u>3</u>	@	\$	<u>1000.00</u>	=	\$	<u>3000.00</u>	
Revegetation:	<u>15</u>	@	\$	<u>20.00</u>	=	\$	<u>300.00</u>	\$ <u>6,300.00</u>

EXCAVATION

Cat days:	<u>2</u>	@	\$	<u>1000.00</u>	=	\$	<u>2000.00</u>	
Excavator days		@	\$		=	\$		
Endhaul volume		@	\$		=	\$		\$ <u>2,000.00</u>

BALLAST & SURFACING

Depth	yds/sta	X	stations	=	yards

UNIT COSTS	Ballast	Surfacing	Riprap
Drill & shoot			
Dig & load	1.00		
Purchase			
Haul	5.25		
Spread	0.30		
Compact	0.25		
Strip/Reclaim			
Crush			
Total	6.80		

Ballast Source: 4250 Pit
Surface Source: _____
Riprap Source: _____

Ballast	<u>1526</u>	yds @ \$	<u>6.80</u>	/yds = \$	<u>10376.80</u>	
Surface		yds @ \$		/yds = \$		
Riprap		yds @ \$		/yds = \$		\$ <u>10,376.80</u>

CULVERTS & FLUMES

G-(Galvanized) P-(Plastic) ED-(energy dissipator) F-(flume)

Diam.	No.	Ga.	Type	Length	Cost/ft	Total
18"	1	16	G	32	15.00	480.00
24"	3	16	G	106	18.00	1908.00

\$ 2,388.00

ABANDONMENT

Excavator days	<u>0.5</u>	@	\$	<u>1000.00</u>	
		@	\$		\$ <u>500.00</u>

OTHER _____ \$ _____

MOVE IN Dozer	@	\$	<u>500.00</u>	
Excav	@	\$	<u>500.00</u>	
	@	\$		
	@	\$		\$ <u>1,000.00</u>

Cost per Station \$ 1741.58

GENERAL EXPENSES Subtotal \$ 22564.80 Subtotal X 1.15% Total \$ 25,949.52

Sale Name	<u>North Johnson</u>	Agr. No. 30- <u>76165</u>	Road No.	<u>Spur A</u>
Compiled by	<u>Stan Ross</u>		Date	<u>April 1, 2004</u>
No. of Stations	<u>11.54</u>		R/W Width	<u></u>

Cat days:	2.5	@	\$	1000.00	=	\$	2500.00	
Excavator days	2.5	@	\$	1000.00	=	\$	2500.00	
Revegetation:	12	@	\$	20.00	=	\$	240.00	\$ 5,240.00

Cat days:	1.5	@	\$	1000.00	=	\$	1500.00	
Excavator days		@	\$		=	\$		
Endhaul volume		@	\$		=	\$		\$ 1,500.00

[illegible]

UNIT COSTS	Ballast	Surfacing	Riprap
Drill & shoot			
Dig & load	1.00		
Purchase			
Haul	5.50		
Spread	0.30		
Compact	0.25		
Strip/Reclaim			
Crush			
Total	7.05		

Ballast Source: 4250 Pit
Surface Source: _____
Riprap Source: _____

Ballast	<u>1203</u>	yds @ \$	<u>7.05</u>	/yds = \$	<u>8481.15</u>	
Surface	<u> </u>	yds @ \$	<u> </u>	/yds = \$	<u> </u>	
Riprap	<u> </u>	yds @ \$	<u> </u>	/yds = \$	<u> </u>	\$ 8,481.15

G-(Galvanized) P-(Plastic) ED-(energy dissipator) F-(flume)

[illegible]

<u> </u>	Excavator days	<u> 0.5 </u>	@	\$	<u> 1000.00 </u>		
			@	\$	<u> </u>		\$ <u> 500.00 </u>

MOVE IN	Loader	@	\$	500.00	
	Trucks	@	\$	300.00	
		@	\$		
		@	\$		\$ 800.00

Cost per Station \$ 1646.39

GENERAL EXPENSES	Subtotal \$ 16521.15	Subtotal X 1.15%	Total \$ 18,999.32
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